

## Patent Abstracts of Japan

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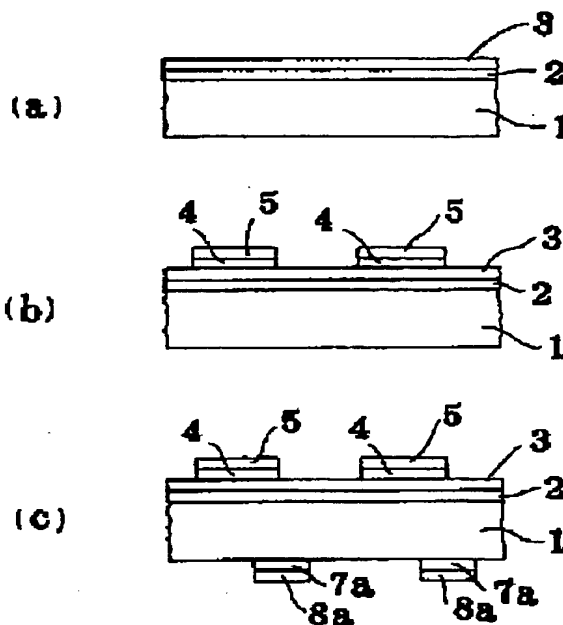
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TITLE : ELECTRODE FOR N-TYPE SiC AND ITS FORMATION



**ABSTRACT :** PURPOSE: To achieve an electrode for n-type SiC for increasing the brightness of a silicon carbide light emitting diode element by containing a large quantity of metal with a high reflection factor at the n-type SiC side.

**CONSTITUTION:** An n-type SiC epitaxial layer 2 and a p-type SiC epitaxial layer 3 are formed on one main surface of an n-type SiC single-crystalline substrate 1, a Ti layer 4 and an Al layer 5 are formed successively on it via a mask, and then an Ag layer 7a and an Ni layer 8a are formed successively on the other main surface of the substrate 1 via the mask. Then, heat treatment is performed for forming the Ti layer 4 and the Al layer 5 as a P-type side Al-Ti ohmic electrode 6 and at the same time the substrate 1 is cut by the dicing technology for forming a silicon carbide light emitting diode element which emits blue light with the Ag layer 7a and the Ni layer 8a as an n-type side Ni-Ag ohmic electrode 9. Therefore, use of the n-type side ohmic electrode 9 achieves a brightness of silicon carbide light emitting diode element which emits 350-900nm light.

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